MONTANA DEPARTMENT OF TRANSPORTATION
JOB PROFILE AND EVALUATION

SECTION I - Identification

Working Title: Computer Network Analyst I

Department Transportation

Job Code Number: 151816

Division & Bureau Information Service Division
Operations Bureau

Job Code Title: Computer Network Analyst **Section & Unit** Network & Ops Team

Pay Band: 6

Position Number : 44007, 25013, 81004, 82005, 81115 and 81116.

Work Address   2701 Prospect Ave
                    Helena, MT 59620

☐ FLSA Exempt   X FLSA Non-Exempt

Profile done by: Kimberly Worthy/Kristi Antosh   Work Phone   444-7489

Work Unit Mission Statement or Functional Description

The Information Services Division (ISD) provides a full range of services for the Montana Department of Transportation (MDT). The bureaus within the division plan and set policy, and coordinate, design, install and maintain the department's information technology infrastructure. This includes network management, server systems administration, desk top and mobile computer systems administration, database administration, applications development and maintenance, integrated systems development, Internet and Intranet web page developments, data security & disaster recovery services, geographic information systems (GIS), global positioning systems (GPS), roadway information collection, user support, training, imaging services, duplication services, IT research and development, budget development and monitoring, procurement administration, contract administration, and project management. The division also includes the MDT Duplicating Services Section.

Describe the Job's Overall Purpose:

This position is responsible for all activities related to systems administration. He or she will support an organization's local area network (LAN), wide area network (WAN), and Internet system or a segment of a network system in support of the Department of Transportation's day-to-day operations. The majority of this work will be through analysis, testing and evaluation activities as well as recommendations for changes and/or replacement events. The incumbent will maintain and administer computing environments including hardware, systems software and associated configurations as well as applications software used in support of one's analysis tasks. The position will be involved in diagnosing more complex hardware and software problems, identifying strategies to improve the infrastructure both on the network and server platforms. He or she will be involved in the planning, coordination and implementation of security measures to protect data, software and hardware and all aspects of Disaster Recovery to ensure our environment stability. The incumbent designs, configures and tests complex computer hardware, networking software and operating system software.

SECTION II - Major Duties or Responsibilities   % of Time

A.   **Maintain Operating Systems** (50%)

Maintains integrity of the operating system environment and performs system software updates and upgrades including planning and scheduling, testing and coordination. Uses MDT's productivity tools to effectively manage assignments.   The incumbent will have demonstrated ability to read and understand technical materials. He or she will work independently with limited supervision, and will have strong time management skills.

1)   Performs server configuration, installation, and setup including Web Servers and Application Servers. Provide server maintenance and support on two of three operating systems utilized by MDT and provides detailed documentation.

2)   Monitors and controls the performance and status of the network resources including LAN, WAN, and internet. Ensures that the system has achieved and maintains optimum performance levels. Diagnoses hardware and software problems, and replaces defective components.

3)   Identifies and recommends changes to improve system and network configuration. Determines hardware and/or software requirements related to these changes. Prepares new equipment specifications, ensuring accuracy and compatibility with existing systems.

4)   Responsible for installation, maintenance, configuration, and integrity of computer systems software. Ensures optimal computer resource utilization through load balancing. Provides short-term and long-term recommendations on needed adjustments.

5)   Responsible for implementation of operating system enhancements that improve the reliability and performance of the system. Develops and implements scripted code to enhance operations processes and web applications.

6)   Provides general database support - completes schema migrations for Oracle and SQL. Performs and/or directs changes to computer databases; tests and implements databases using database management systems and utilizing Oracle tools **OR** Provides AD support including AD tools and user account maintenance.

7)   Monitors file share security, developing an understanding of security requirements. Works with senior staff to identify and implement security requirements.

8)   Provides general storage management. Assists in implementation.   Monitors usage and performance. Recommends options and alternatives as appropriate.

9)   Coordinates with the Department of Administration in the administration and maintenance of cross Agency servers/projects (i.e. Exchange administration).

10) Performs complex system tests. Develops detailed 'use case' scenarios, including recovery failures. With general supervision, responsible for the routine testing and analysis of elements of the network facilities.

11) Able to effectively lead small to medium project efforts; assign duties and roles appropriately.

12) Effectively utilizes OS, database, and networking specific utilities and tools.

13) Provides business applications security analysis and recommendations. Performs patch testing, impact analysis and recommendations for implementation on the PC platform.

14) Develops understanding of MDT applications and their inter-relationship and impact on the infrastructure.

15) Monitors network, database and/or other performance indicators to determine whether adjustments need to be made on either the short or longer term.

B. **Document Processes and Outputs** (25%)

Follow MDT's documentation standards to develop and maintain documentation and to provide status reports and updates using MDT's productivity tools. Maintain operations documentation for individual restorability and Disaster Recovery. Develop and provide security reporting necessary for senior technicians. Provide status reports and regular updates to supervisor or project lead.

1) Develops and gains approval of documentation for duties as assigned.

2) Uses trouble-shooting skills and analytical thinking to assist in the investigation, planning, documentation, implementation, and maintenance of Disaster Recovery plans.

3) Develops and write procedures for installation, use, and troubleshooting issues of common hardware and software. Develops and writes techniques for approaching unique MDT hardware and software.

4) Conduct Business Application Security analysis providing recommendations to ISD Staff.

5) Produces Unit and System test documentation

6) Develops clear position papers detailing pros and cons of a given technology under consideration.

C. **Staff Support** (25%)

Maintain active interactions with ISD staff, consultants, and vendors. Provide next level support and mentoring for user support staff. Maintain shared peripherals (printers, scanners).

1) Independently performs routine security access procedures.

2) Performs issue resolution and escalation. Effectively interacts with consultants, vendors, and ISD staff on support issues.

3) Uses problem solving skills to diagnosis and resolve database, network or security problems encountered by development or user support staff. Work with senior staff to implement extensive changes.

4) Conducts both user and staff training when needed.

5) Provides mentoring and guidance, including limited work direction, to other staff.

What guidelines, manuals or written procedures support this position?

Laws, regulations, guidelines, manuals or procedures available to the incumbent include MCA, ARM, Information Services Division policies and operational procedures, system manuals and documentation, Montana Operations Manual, SABHRS manuals, MDT ISD and state information technology standards, department operating procedures, and technical system references. Primary guides for the work are found in standards of the profession and current best practices in information technology.   Available references include various software and system manuals and technical documentation.

Does this position supervise others? ☐ Yes ☒ No

This position is responsible for:
☐ Hiring ☐ Firing ☐ Supervision ☐ Pay Level
☐ Performance Management ☐ Promotions ☐ Discipline
☒ Other: Provides limited work direction to others

Attach an Organizational Chart.

SECTION III - Minimum Qualifications - List minimum requirements for the **first day** of work.

Critical knowledge and skills required for this position:
Knowledge

Expanded knowledge or experience with computer operating systems (both server and PC) specific to MDT (currently VMS, Linux, Windows 2003); network administration principles and processes, Cisco equipment, VPN, Wireless or other technology, Oracle and/or SQL database basics or security understanding (AD, DB and/or file); High-level understanding of Disaster Recovery and Business Resumption planning contrasted with High Availability; familiarity with

domain structures and user authentication. Basic understanding of networking topology at MDT and ITSD; Understanding of database from both developer and systems view, Understanding of vitual technology.

Skills

Reading Comprehension, Active Listening, Writing, Speaking, Logical, Analytical, and Critical Thinking, Deductive and Inductive Reasoning, Active Learning, Service Orientation, Problem Solving, Operations Analysis, Troubleshooting, Quality Control, SDLC, MS Office (Word, Excel, Outlook), keyboarding, Scripting languages (at least 2), Negotiation and/or Persuasion, Judgement and Decision Making, Systems Analysis

Behaviors required to perform these duties?
Plan, Organize, Gather Information and Conduct Research
Define an end result. Set or follow a course of action to achieve it. Anticipate potential obstacles and monitor progress. Organize tasks into component parts in a rational, methodical way. Collect and use relevant information, data, and opinions.

Identify Problems
Assess situations in a logical and methodical way based on facts. Seek root causes. Recognize patterns, connections, themes, and issues. See implications and consequences of a situation or information.

Creativity and Problem-Solving
Generates ideas, fresh perspectives and original approaches; open-minded. Uses creativity and originality when problem-solving. Goes beyond traditional ways to address issues and problems. Develops feasible solutions based on logical assumptions and factual observations.

Provide Analytical Thinking and Deductive Reasoning
Uses logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems, work tasks and strategies; Able to demonstrate that conclusions reached utilizes previously known facts such that the individual can quickly eliminate possible causes (and solutions).

Personal Accountability and Ownership
Accepts individual responsibilities for all actions taken; Reliable – honors commitments; is self-motivated yet is able to take direction from supervisor or senior team members. Able and willing to align behavior with the needs and goals of the organization and provide a visible role model for others. Holds self accountable for organizational activities, services, decisions, successes and failures, and subsequently performs the job with broader goals in mind.

Prioritizing, Multi-tasking, Balancing Multiple Projects
Recognize or establish the relative importance of multiple issues, tasks, and opportunities to maximize the productivity of the organization.

Quality, Accuracy, Attention to Detail
Achieve excellent work results by attending to details. Demonstrate an appropriate level of precision to complete projects successfully and to execute job responsibilities in a timely manner.

Reading Comprehension
Demonstrates ability to take information provided in manuals and convert it into identifiable, actionable steps. Successfully reviews white papers, technology updates and provides synopsis for management decisions.

Listening
Give full attention to and make a conscious effort to hear other's ideas, concerns, questions, and issues with interest, empathy, and objectivity. Paraphrase and ask questions to ensure understanding of the message when required.

Responsiveness, Follow up
Assumes responsibility for and delivers on commitments to the customer. Initiates contacts to clarify issues or problems in a timely manner. Keeps the customer up-to-date about projects.

Results Oriented
Achieve goals and bring projects to completion. Investigate, calculate, and proceed through a project or task to bring about a conclusion. Persist and stay focused when faced with a series of challenging or uncertain situations. Demonstrate a concern for working well or for competing against a standard of excellence.

Understanding, Sensitivity, Trust Building
Interact openly and honestly. Encourage others to express viewpoints. Listen and respect different viewpoints. Address misunderstandings directly with those involved. Maintain confidences. Demonstrate an awareness of nonverbal as well as verbal communication. Elicit trust from others by showing honestly, reliability, and integrity.

Critical Thinking and Inductive Reasoning
Use a disciplined process of actively conceptualizing, analyzing, and applying information as a guide to action. Applies that thought process whether pursuing issue resolution, making recommendations and/or seeking strategic vision opportunities. Utilizes inductive logic based on a small number of observations or experiences to determine whether the likelihood of something happening is sound such that the individual can predict outcomes, is more able to estimate timetables, etc.; forms relationships between seemingly unrelated events.

Decision Making
Makes decisions in a timely fashion and recognizes when the decision making level is not theirs. Able to analyze all information, organize thoughts, consider the cause and effect for each decision and document the final decision. Expresses and presents the final decision to management and/or the user community. Challenges the status quo by taking calculated actions in complex, ambiguous, contentious, or hazardous situation to force an issue or set a direction.

Relationship Building
Builds short- and long-term relationships with people critical to work and project success. Relationships involve all those encountered at work. Is respected as a valid resource through consistent actions and behaviors. Builds relationships by bringing conflicts and disagreements into the open, as appropriate. Makes appropriate or acceptable compromises in order to meet goals and to gain cooperation from others.

Speaking Effectively
Express and present thoughts and ideas clearly, succinctly, and in an understandable manner individually and in a group. Adjust language, delivery, or terminology to meet the needs of the audience. This competency includes any type of verbal communication such as giving presentations, providing training, giving testimony, speaking in person or by phone.

Writing Effectively
Express and present information and ideas in writing which is clear, succinct, and understandable. Adjust the language, writing style, and terminology used to meet the need and level of understanding of the reader. Utilize knowledge of the structure and content of the English language, including the

meaning and spelling of words, rules of composition, and grammar. (This competency includes any type of formal or informal written communication: i.e. letters, reports, studies, presentations, articles, rules, policies, procedures, and manuals.)

Education:

Check the <u>one box</u> indicating **minimum** education requirements for this position for a new employee the **first day** of work:

☐ No education required ☐ Related AAS/2-years college/vocational training
☐ High school diploma or equivalent ☒ Related Bachelor's Degree
☐ 1-year related college/voc. training ☐ Related Master's degree

Required/Acceptable degrees: Bachelor's Degree in Computer Science or a closely related field such as Information Systems Design or Computer Programming. Other BA/BS degrees will be acceptable with a minimum of 5 years of general, technical data center or systems operations experience.

Other education, training, certification, or licensing desired (specify): Working knowledge of and or experience with computer operating systems for both server and personal computer; such as Linux, Unix, VMS and/or Windows; working knowledge of the Oracle RDBMS and its related tools specifically; database structure at a more generic level, or a similar working knowledge of network equipment, tools and techniques or general network administration. Certifications such as MCSA, CCNA or CCDA, LPIC or RHCT are desirable.

Experience:

Check the <u>one box</u> indicating **minimum** work-related experience requirements for this position for a new employee the **first day** of work:

☐ No prior experience required ☒ 3 to **4** years
☐ 1 to 2 years ☐ 5 or more years

Other specific experience (optional):

Alternative Qualifications:

This agency will accept alternative methods of obtaining qualifications. ☒ Yes ☐ No

1) College courses completed will be evaluated on a case by case basis to potentially reduce the years of experience required. Thirty (30) completed and passed semester credits (or the equivalent in quarter credits) from an accredited college or university may be considered as one year of college.

2) In replacement of the related Bachelor's Degree requirement, MDT would accept:
   - an AS Degree in Computer Science or Computer Information Systems and a minimum of 6 years of general technical data center operations or systems management experience **OR**
   - no degree and 8 or more years of general technical data center operations or systems management experience.

Other education, training, certification, or licensing desired (specify): Working knowledge of and or experience with computer operating systems for both server and personal computer; such as Linux, Unix, VMS and/or Windows; working knowledge of the Oracle RDBMS and its related tools specifically; database structure at a more generic level, or a similar working knowledge of

network equipment, tools and techniques or general network administration. Certifications such as MCSA, CCNA or CCDA, LPIC or RHCT are desirable.

SECTION V – Signatures

Signature indicates this statement is accurate and complete.

Employee:

Name: Title

Signature   Date

Immediate Supervisor:
Tom O'Sullivan   Systems/Operations Section Supervisor
Name: Title

Signature   Date

Division/District Administrator:
Michael G. Bousliman   Division Administrator
Name: Title

Signature   Date

Department Designee:

Name: Title

Signature   Date